AMENDMENTS TO THE CLAIMS

Claim 1 (Currently Amended): An electromagnetic probe, comprising at least one assembly comprising in combination:

. a coaxial type connection;

. a ground plane connected to the outer sheath of the coaxial connection;

. a reflector cone placed facing the ground plane and shaped to define impedance that is at least substantially constant along its profile~~;~~, said reflector being electrically isolated, and

. a dielectric medium interposed at least in part between the reflector cone and the ground plane.

Claim 2 (Currently Amended): A probe according to claim 1, further comprising a sleeve ~~centered on~~ connected to the central part of the ground plane and placed facing the reflector cone.

Claim 3 (Original): A probe according to claim 1, further comprising a rod-shaped element passing through at least part of the reflector cone and constituting a matching stub extending the central core of the coaxial connection.

Claim 4 (Original): A probe according to claim 1, wherein the assembly is circularly symmetrical about a central axis.

Claim 5 (Currently Amended): ~~A~~ An electromagnetic probe ~~according to claim 1~~, comprising at least one assembly comprising in combination:

. a coaxial type connection;

. a ground plane connected to the outer sheath of the coaxial connection;

. a reflector cone placed facing the ground plane and shaped to define impedance that is at least substantially constant along its profile; and

. a dielectric medium interposed at least in part between the reflector cone and the ground plane, wherein the reflector cone has a profiled surface defined by a generator line that is concave towards the ground plane.

Claim 6 (Original): A probe according to claim 1, wherein the ground plane is defined by a plate.

Claim 7 (Original): A probe according to claim 6, wherein the ground plane has a surface facing the reflector cone, which surface converges towards the cone and towards the central axis.

Claim 8 (Withdrawn): A probe according to claim 7, wherein the converging surface of the ground plane possesses curvature that is generally continuous.

Claim 9 (Original): A probe according to claim 7, wherein the converging surface of the ground plane is formed by a generally plane plate having a cylinder projecting from its center.

Claim 10 (Original): A probe according to claim 2, wherein the sleeve is stepped.

Claim 11 (Original): A probe according to claim 10, wherein the sleeve is made up of a plurality of cylinders on the same axis, and of decreasing diameter going towards the reflector cone.

Claim 12 (Original): A probe according to claim 1, wherein at least a portion of the dielectric medium possesses permittivity greater than 1.

Claim 13 (Original): A probe according to claim 1, wherein the dielectric medium substantially fills the space lying between the reflector cone and the ground plane, with the exception of a peripheral zone adjacent to the ground plane.

Claim 14 (Original): A probe according to claim 1, wherein the ground plane and the sleeve are made out of a single piece.

Claim 15 (Original): A probe according to claim 3, wherein the rod-shaped element constituting a stub is stepped.

Claim 16 (Original): A probe according to claim 3, including a dielectric bushing surrounding at least a portion of the stub-forming rod-shaped element.

Claim 17 (Original): A probe according to claim 1, comprising a plurality of assemblies centered on the axes that are not mutually parallel so as to form a multidirectional probe.

Claim 18 (Original): A probe according to claim 17, wherein the ground planes of the various individual assemblies lie on the outside faces of a polyhedron.

Claim 19 (Original): A probe according to claim 1, comprising three individual assemblies centered on the respective axes O-O that are mutually orthogonal in pairs.

Claim 20 (Original): A probe according to claim 17, comprising three individual assemblies lying on faces defining a corner of a cube.

Claim 21 (Original): A probe according to claim 17, comprising a support polyhedron integrated with the ground planes of the various individual assemblies.

Claim 22 (New): A probe according to claim 5, further comprising a sleeve connected to the central part of the ground plane and placed facing the reflector cone.

Claim 23 (New): A probe according to claim 5, wherein the assembly is circularly symmetrical about a central axis.

Claim 24 (New): A probe according to claim 5, wherein the dielectric medium is circularly symmetrical about a central axis and possesses permittivity greater than 1.

Claim 25 (New): A probe according to claim 5, wherein the dielectric medium substantially fills the space lying between the reflector cone and the ground plane, with the exception of a peripheral zone adjacent to the ground plane.